DOCUMENT RESUME

ED 181 007 SP 015 439

AUTHOR	Ignatovich, Frederick R.: And Others
TITLE	Value/Belief Patterns of Teachers and Those Administrators Engaged in Attempts to Influence Teaching. Research Series No. 43.
INSTITUTION	Michigan State Univ., East Lansing. Inst. for Research on Teaching.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	Oct 79
CONTRACT	400-76-0073
NOTE	41p.
AVAILABLE FROM	Institute for Research on Teaching, College of Education, Michigan State University, 252 Erickson Hall, East Lansing, MI 48824 ($2.00)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Administrator Attitudes: Administrator Role: *Affective Behavior: Beliefs: Conflict: *Educational Philosophy: Elementary Education: Humanistic Education: *Personal Values: Principals: *Teacher Administrator Relationship: *Teacher Attitudes

ABSTRACT

An investigation utilizing Q-methodology identifies and analyzes beliefs about teaching, learning, and classroom organization of classroom teachers, elementary school principals, and administrators who attempt to influence classroom procedure through the implementation of rational management models. The findings suggest that points of conflict between these groups issue from deeply rooted attitudes concerning the nature of managing children in an educational context, a variable dependent on an individual's relative proximity to the actual classroom situation. (LH)

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Research Series No. 43

VALUE/BELIEF PATTERNS OF TEACHERS AND THOSE ADMINISTRATORS ENGAGED IN ATTEMPTS TO INFLUENCE TEACHING

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Published By

The Institute for Research on Teaching
252 Erickson Hall
Michigan State University
East Lansing, Michigan 48824

October 1979

SP 015 439

This work is sponsored in part by the Institute for Research on Teaching, College of Education, Michigan State University. The Institute for Research on Teaching is funded primarily by the Program for Teaching and Instruction of the National Institute of Education, United States Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position, policy, or endorsement of the National Institute of Education. (Contract No. 400-76-0073)

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Abstract

Some possible points of conflict between classroom teachers and certain administrators were investigated. The authors used Q-methodology to identify and analyze the beliefs about teaching, learning, and classroom organization of three groups of school personnel: (1) classroom teachers, (2) elementary principals, and (3) those administrators attempting to influence classroom procedures by implementing rational management models. The teachers and elementary principals were similar in their beliefs in that they emphasized such things as humanistic approaches to instruction, effective communal organization, and positive relations between teachers and students. The administrators involved in implementation of rational management models emphasized such things as abstract modeling of classroom learning, student achievement on standardized tests, administrative evaluation, and the importance of outside forces on classrooms. These differences in perspective are explained by the concepts of gemeinshaft and gesellshaft. The findings suggest that the points of conflict between classroom teachers and certain administrators are not simply a teacher-administrator issue, but an issue between those who are close to the problem of managing children and those who are distant from it and hence dependent on an idealized and abstracted view of the educational process.

Value/Belief Patterns of Teachers and Those Administrators Engaged in Attempts to Influence Teaching[1]

Frederick R. Ignatovich, Philip A. Cusick, and James E. Ray[2]

There have been many attempts by educators outside the classroom to influence events inside the classroom by means of some instructional model that they believe is more "rational" than those teachers are presently using. But there are well-documented cases of teacher resistance to those attempts (Bleecher, Note 1; Clinton, Note 2; Levine, Note 3; Patton & Perron, Note 4). The purpose of this study was to examine and describe some possible points of conflict in values and beliefs about teaching, learning, and classroom organization between teachers and those administrators outside the classroom who are actively engaged in attempts to influence classroom procedures by the implementation of rational models.

This study draws on background material from three sources.

First are the observational studies of classroom teachers by Janesick (Note 5), Martin (Note 6), and Smith and Geoffrey (1968). These were undertaken in classrooms of reportedly successful teachers, and

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[1]This paper, which was presented at the 1979 meetings of the American Educational Research Association, is based on a doctoral dissertation submitted in 1978 by James E. Ray to Michigan State University, entitled, "A Study to Examine Belief Patterns about Teaching, Learning, and Classroom Organization Among Teachers, Administrators Engaged in Implementing Rational Management Models, and Elementary Principals."

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in all cases, those teachers directed a great part of their efforts toward creating a mini-community with students. They sought to instill in students a feeling for the classroom as a collectivity in which each could obtain recognition and satisfaction from contributing to the unit. Each student was to take responsibility for not only his own actions, but for the actions of his fellow students, and the participants regarded any action that violated the collective norm as a transgression. This is not to suggest that academic achievement was of minor importance to these teachers; instead, they felt that to be successful, they first had to create, in Lortie's (1975) terms, "cordial, disciplined, and work-eliciting relationships" between themselves and students and among students themselves (p. 175). The development and maintenance of these small communities were a fundamental part of the teachers' classroom perspective and provided the basis from whence classroom activities were developed.

Sociologists have carefully considered the structure of small communal organizations, and Tönnies (1957) in particular has outlined the characteristics of these societies, which he terms "gemeinschaften." The characteristics include an emphasis on the collective well-being rather than individual good, isolation from and resistance to influences from outside, relations based on personal affectivity, resistance to change, identification of means with ends as opposed to a means-ends dichotomy, and an emphasis on behavior that is collective and present-oriented. These characteristics match the social elements that the teachers in the observational studies strove to realize in their classrooms. The relationships they developed, activities they designed, and the results they aimed for seemed to emanate from and nurture these mini-communities, or "gemeinschaften."

Sociologists have also considered social structures which are quite different from gemeinschaften. These societies or "gesellschaften" are characterized by an emphasis on the individual attainment of a set of discrete ends, the alteration of means in order to maximize returns, and on individual achievement, particularly individual "happiness" rather than a collective good. Other characteristics include relationships that are temporary and secondary, openness and accessibility from without, affective neutrality, and a belief that change is good (Tönnies, 1957). With their emphasis on abstract principles and a sharp distinction between means and ends, gesellschaften may be considered more "rational" than gemeinschaften.

This concept of gesellschaft leads to the third body of background material, that of the management literature in schools (Hartley, 1968; Hovey, 1968; Knezevich, 1975; Montello, 1975). This literature reveals that the models espoused by the management-oriented are similar to gesellschaften. The emphasis is on individual achievement as opposed to a collective good, on secondary, not primary relations, cognitive rationality rather than affective empathy, a sharp distinction between ends and means, and an openness to administrative supervision. Accountability-assessment models, variations on program budgeting, program evaluation review techniques, management by objectives, and competency-based performance models, are supported by or result from a gesellschaft perspective.

This contrast between the hypothetical gemeinshaft orientation, which we suggest teachers take toward their classrooms, and the gesellshaft orientation, which we believe underlies the management models developed to coordinate and control classroom activities from without, is underscored by teachers' resistance to attempts to impose

management models.

In sum, it seems from some observational studies of teachers that their major efforts in the classroom are directed toward creating a gemeinschaft-type society with their students. This "small community" is then the vehicle through which the year's activities can be structured, learning activities undertaken, and goals achieved. But certain administrators have been engaging in attempts to "rationalize" classroom procedures and outcomes, and these attempts have contained characteristics which are almost diametrically opposed to the suggested gemeinschaft orientation of teachers. There is strong evidence that those attempts have fomented considerable stress within school systems between those administrators and teachers.

Methodology and Procedures

This study used Q-methodology to identify and analyze the beliefs about teaching, learning, and classroom organization of three groups of school personnel. The first group consisted of administrators in Michigan who were actively engaged in attempts to influence some elementary classroom operating procedures by the implementation of rational management models. The second group was composed of elementary classroom teachers, and the third consisted of elementary principals who were not engaged in rational management model usage. Q-methodology was developed by Stephenson (1953) and involves the sorting of statements written on cards into categories with statistical treatment of data to establish clusters of people with similar response patterns.

Our first task was to develop a list of statements reflecting beliefs held by administrators and teachers. We identified and interviewed a population of administrators outside the classroom who were presently

engaged in using rational models. After over 100 phone calls to superintendents, principals, state department of education personnel, and central office administrators, we identified 12 administrators who fit out criteria. While we were surprised that we could not locate more than 12 in the state, we accepted that as the population. Among the 12 were three superintendents, two principals, an associate superintendent of the Michigan Department of Education, and six people in district central offices who have positions in planning and evaluation. Each had publicly identified himself with such an attempt, and the attempts were written out and publicly distributed in the state or district. Each program exemplified what we considered to be a rational management system; each was phrased abstractly, spoke of coordinating teachers' efforts, and emphasized cognitive achievement for students as individuals, and the importance of administrative evaluation and coordination. We taped interviews with each of the 12, typed the protocols, and examined them for content. Table 1 lists some of the statements that exemplified the beliefs held by these administrators about teaching, learning, and classroom processes.

Our subject administrators hold an integrated picture of learning, teaching, and classroom procedures. They view school learning as the acquisition of a set of discrete and measurable skills by a heterogeneous number of individual learners. Since they all see a clear difference between teaching, the means, and learning, the end, they espouse a rationalistic approach to instruction, with the applied means clearly distinct from measurable ends. They believe that ideally, this process should lend itself to being formulated as a series of clearly defined rational procedures which, since they are stated abstractly, can be applied universally and evaluated from without. Since the processes

Table 1

1. Learning is the acquiring of discrete skills
2. Students are quite different from one another and should be approached individually.
3. Teaching can be characterized as a "delivery system" geared toward individual students.
4. Teachers have to identify where a child is on a particular skill level and then bring appropriate resources to help him move to a higher level.
5. It is important to articulate classroom procedures and processes to parents.
6. Teaching-learning decisions can be made outside the classroom.
7. There is room for individualized approaches among teachers but they have gone too far.
8. A system will improve teaching but not tell teachers how to teach.
9. Classrooms need to be more open and accessible.
10. Teachers should have a choice, but their choice should be within a "modeled" context.
11. Measurable achievement is the goal.
12. Administrators should review instructional processes.
13. Competency levels should be phrased abstractly, and plans should be developed to attain those levels.
14. A highly mobile student population justifies the press for coordination.
15. There needs to be a more precise division of labor in education.
16. Communication among teachers should be increased.

can be abstracted and modeled, then both teaching and learning can be organized from without and an authoritative administrative hierarchy has an important place in learning. It follows that if learning can best be attained by the application of abstractly defined and standardized

processes, then classroom procedures should be open, accessible and manipulable by those outside the classroom.

In sum, we suggest that the five key elements in the perceptual set held by those administrators were: (1) objectivism of learning, (2) universalism of students, (3) individualization of instruction, (4) rationalization of classroom processes into abstract instructional plans, and (5) the importance of outside administrative hierarchy which will assist in standardization and external evaluation.

While we used the interviews to identify some possible beliefs held by administrators, we were testing for points of conflict and had to be sure that the issues expressed by these concepts had some meaning for teachers. To establish this and to search for further concepts, we studied two sources. First, we studied the works cited earlier, which contained descriptive material about classroom teaching, and second, we undertook a series of interviews with experienced elementary teachers in which we explored their views on teaching, learning, and classroom organization.

In this way we added two more concepts to give our subjects a greater possible range of expression. The first was "affectivity" by which we mean that much of a teacher's efforts seemed to be designed to gain the personal respect and affection of the students. This affectivity seems to be an end in itself. "I get a chance to treat people as I wish to be treated". . ."The first goal is to get a student to feel good about himself" (from interviews). The second concept we added is an "emphasis on behavior." The teachers seemed to express instructional goals in terms of desired student behavior in the classroom rather than either achievement on some test or on some out-of-school future time event (i.e., what the child will become in later years).

Thus we expanded our list of concepts, and from those seven developed

a set of items to explore possible differences between teachers and administrators intent on affecting teaching.

Selection of Participants

In Q-methodology the selection of participants is not usually done randomly. Rather, individuals are chosen to represent identifiable divisions of the population with which the study is concerned. With our limited but very identifiable group, Q-methodology appeared to be an appropriate procedure. It would not have been possible to randomly select a group of administrators around the state who were actively engaged in attempts to influence classroom procedures. Since only 12 administrators in the state fit our criteria, the Q-sort was administered to the same 12 whom we had earlier interviewed.

The selection process for teachers proceeded in the following manner. Six districts in Michigan were contacted and permission was granted from the district office to approach individual schools within these districts to obtain a number of teacher respondents. A non-random sample of 47 teacher respondents was acquired. The intent of this study was to identify and analyze belief patterns of some elementary classroom teachers in general and not to seek reactions of particular teachers who were directly affected by the actions of such administrators described above.

A nonrandom selection process also took place for the elementary principals. Sixteen of the 22 principals were selected from the Middle Cities School Association, a non-profit organization of urban school districts in Michigan. The remaining six were from school districts in central Michigan.

Selection of Q-Sort Items

To operationalize each of the seven concepts, an initial set of

sixty items was developed. This number was reduced to 47 in order to: (1) make the sorting process more manageable; (2) remove possible redundancies, and (3) remove items which could be misinterpreted.

Before administering the items to the study subjects, a pilot test was run using only teachers because of the limited number of administrators who are engaged in rational management model usage in this state. Sixteen teachers were pilot tested to see if the items were representative of the concepts. These teachers were encouraged to critique the items. We found via Q-factor analysis that these teachers' beliefs about teaching, learning, and classroom organization did cluster together, indicating a similar value and belief pattern.

Administration of the Q-Sort

The 47 items were mimeographed onto 5 x 7 index cards suitable for sorting and were assigned item numbers. The participants were asked to sort the cards (items) into nine piles on a continuum ranging from very strongly agree to very strongly disagree, with varying degrees in between. The participants were required first to look through the entire deck of 47 cards and select 11 they most agreed with and place them on the left, 11 more they most disagreed with were to be placed on the right, and the remaining 25 cards were to be placed in the middle.

The next step required each participant to take the first stack of 11 most agreed with cards and further subdivide this pile by placing two cards in the very strongly agree, three cards in the strongly agree, and the reamining six cards in the moderately agree categories. Participants were instructed to follow a similar procedure for the stack of 25 cards in the middle and the 11 cards to the right until all cards were placed in the categories that best represented the respondent's agreement or disagreement with the statements. The participant was

informed that following the initial sort, it was permissible to go back and change cards, but the final distribution of cards had to be in the following pattern:

	Very Strongly Agree								Very Strongly Disagree
Pile No.	9	8	7	6	5	4	3	2	1
No. of Items	2	3	6	8	9	8	6	3	2

Treatment of the Data

A Q-analysis computer program analyzed the data in the following manner:

1. A Pearson product-moment correlation matrix was constructed by correlating every person's sort of items with those of every other person.

2. This matrix was evaluated for principal component factors and subsequently varimax rotated. The obtained factors then represented ideal types of different belief patterns.

3. The program then weighted each item response of the person for the factor with which he/she was most closely associated, using the factor loading in the formula $r/(1-r^2)$ to arrive at the weight. We subsequently summed these weighted responses for each item separately, and produced an item array of weighted responses for each type. These item arrays were then converted to z-scores. This procedure resulted in a description of a "proto" or "pure" type in which persons with very strong loadings have exponentially greater impact than persons with low loadings.

4. The item arrays were then ordered from most to least accepted on the basis of the z-scores to provide a hierarchy of item acceptance for each "pure" type.

5. If more than one type was produced, the acceptance of each item by each type was then compared to provide a basis for differentiating the types from one another. An absolute difference of 1.0 in z-scores for an item between types was considered meaningful to identify differences in belief patterns. Also z-scores at the extremes (± 1.0)of each type were interpreted at the most intense beliefs.

From the steps described above, we were able to examine the different patterns of belief about teaching, learning, and classroom organization between the elementary classroom teachers, the administrators engaged in

rational management models (systems) usage, and the elementary principals if they in fact clustered as types.

Validity

Since we were testing the hypothesis that teachers' belief patterns about teaching, learning, and classroom organization differ from those engaged in rational management model usage, as well as from administrators not engaged in rational model usage, the following definition of validity was applied: "If the hypothesis is valid, and if the Q-sort adequately assesses belief patterns, the statistical analysis of the sorts should show different types of belief patterns which are primarily defined by the three groups: teachers, rational managers, and elementary principals.

Results

Analysis 1. Elementary Teachers

The Q-analysis of 47 elementary teachers' belief patterns resulted in a one factor solution accounting for 41.8% of the total variance and 66% of the estimated communality. The scree and common variance tests suggested six and four factors, respectively, but Humphrey's test suggested that only the first factor was meaningful. The array of extreme item z-scores produced by weighting each teachers' item responses according to his or her association with the factor is presented in Table 2. Positive z-scores indicate items of strong agreement and negative z-scores indicate items of strong disagreement.

Inspection of the item descriptions and underlying concepts reveals that these teachers strongly believe in an affective classroom environment in which the teacher is primarily responsible for the development of individual students' positive social attitudes in a normative society.

Table 2

Extreme Items for Teacher Type 1

z-scores greater than 1.0
(Items of Strongest Agreement)

ITEM #	ITEM DESCRIPTION	z-score
40	The most important thing teachers can do is to treat students with personal respect (affectivity).	2.041
45	Positive relations between teachers and students are more important than achievement on standardized tests (affectivity).	1.690
41	Building positive student social attitudes is an important goal for teachers (affectivity, behavior).	1.640
28	The most successful classrooms are those wherein each child is working at his or her individual level (incremental, individual).	1.628
27	It is as important for a child to achieve individually as it is for that child to conform to classroom norms (incremental, individual).	1.468
2	Good teaching is an art and will remain an art (abstract rationality).*	1.240
17	What takes place in the classrooms should be primarily the responsibility of the teachers (admin, learning process).	1.030

z-scores less than -1.0
(Items of Strongest Disagreement)

ITEM #	ITEM DESCRIPTION	z-score
23	The teacher's major task is to develop those particular skills that standardized tests show the students to be deficient in (incremental, individual).	-1.004
1	Teachers' major efforts are to be directed toward teaching those things that can be tested (abstract rationality.	-1.406
20	Choices teachers have regarding particular programs are to be made from those selected by central office planners and coordinators (admin, learning process).	-1.444
38	Those educators outside the classroom are in a better position to learn about innovations in teaching than are teachers (coordination, without).	-1.539
19	Administrators are to have a strong voice in the methods and materials used in the classrooms (admin, learning process).	-1.669
33	Administrators who are not in direct contact with classrooms can still maintain a good feel for what goes on in classrooms (coordination, without).	-1.784
21	Changes in teaching techniques are to be determined by administrators (admin, learning, process).	-1.873
39	Student achievement test scores are the best way to measure teacher effectiveness (coordination, without).	-2.302

*Negative Item

On the other hand, this type strongly disagrees with the legitimacy of those external to the classroom to influence or determine what happens in the classroom and strongly disagrees with any emphasis on teaching to specific measurable skills.

In sum, elementary teachers' belief patterns appear to emphasize an affective internal orientation with external intrusions via administrators or rational criteria viewed negatively. We were somewhat surprised to find that only one factor or type was identified by the analysis but not surprised by the item profile which emerged.

Analysis 2 - Elementary Principals and Administrators Engaged in Rational Management

The Q-analysis of 34 administrators' (22 elementary principals and 12 rational management advocates) belief patterns resulted in a two factor solution accounting for 40% of the total variance and 50% of the estimated communality. The scree and common variance tests suggested 3 and 7 factors respectively but Humphrey's test suggested that only the first two factors were meaningful. A varimax rotation of the two factor solutions resulted in factor one accounting for 23.2% of the total variance or 57% of variance accounted for by both factors. For factor two 17.8% and 43% were the respective percentages of variance. The array of extreme item z-scores for both types are presented in Tables 3 and 4, and the descending array of items for which a z-score difference between types exceeded 1.0 z-scores is presented in Table 5.

Inspection of the extreme items for Type 1-administrators (the type that subsequent analyses showed consisted of primarily elementary principals) reveals a set of items very similar to the single teacher type identified

Table 3

Extreme Items for Administrators Type 1

z-scores greater than 1.0
(Items of Strongest Agreement)

ITEM #	ITEM DESCRIPTION	z-score
45	Positive relations between teachers and students are more important than achievement on standardized tests (affectivity).	1.928
40	The most important thing teachers can do is to treat students with personal respect (affectivity).	1.806
43	Teachers who concern themselves with humanistic approaches to instruction are more effective than those who concern themselves with measurable outcomes (affectivity).	1.789
28	The most successful classrooms are those wherein each child is working at his or her individual level (incremental, individual).	1.673
41	Building positive student social attitudes is an important goal for teachers (affectivity, behavior).	1.475
27	It is as important for a child to achieve individually as it is for that child to conform to classroom norms (incremental, individual).	1.278
2	Good teaching is an art and will remain an art (abstract rationality).*	1.260
42	There is too much emphasis placed on the cognitive aspect of learning and not enough on the affective (affectivity).	1.035

z-scores less than -1.0
(Items of Strongest Disagreement)

ITEM #	ITEM DESCRIPTION	z-score
37	District wide coordination of learning activities is important to teacher success (coordination, without).	-1.008
34	Teachers are to have autonomy over instructional activities (coordination, without).	-1.051
23	The teacher's major task is to develop those particular skills that standardized tests show the students to be deficient in (incremental, individual).	-1.156
20	Choices teachers have regarding particular programs are to be made from those selected by central office planners and coordinators (admin, learning process).	-1.329
1	Teachers major efforts are to be directed toward teaching those things that can be tested (abstract rationality).	-1.570
38	Those educators outside the classroom are in a better position to learn about innovations in teaching than are teachers (coordination, without).	-1.592
21	Changes in teaching techniques are to be determined by administrators (admin, learning process).	-2.033
39	Student achievement test scores are the best way to measure teacher effectiveness (coordination, without).	-2.153

*Negative Item

Table 4

Extreme Items for Administrators Type 2

z-scores greater than 1.0
(Items of Strongest Agreement)

ITEM #	ITEM DESCRIPTION	z-score
6	Teachers need to clearly explain the intended outcomes of their instructional activities (abstract rationality).	2.191
4	A system wherein goals and objectives are clearly stated and the relations between them clearly defined is essential to good teaching (abstract rationality).	1.947
16	Administrative evaluation is good for teaching (admin, learning process).	1.638
41	Building positive student social attitudes is an important goal for teachers (affectivity, behavior).	1.629
27	It is as important for a child to achieve individually as it is for that child to conform to classroom norms (incremental, individual).	1.382
28	The most successful classrooms are those wherein each child is working at his or her individual level (incremental, individual).	1.291
40	The most important thing teachers can do is to treat students with personal respect (affectivity).	1.253
18	Administrative supervision can best be described as an important contribution to student learning (admin, learning process).	1.124
24	A teacher's job is to be the orchestrator of individualized learning activities (incremental, individual).	1.092
7	It is important that teachers have clearly stated goals for all classroom activities (abstract rationality).	1.025

z-scores less than -1.0
(Items of Strongest Disagreement)

ITEM #	ITEM DESCRIPTION	z-score
10	Teachers keep up with the latest instructional techniques (urgency change).*	-1.082
1	Teachers' major efforts are to be directed toward teaching those things that can be tested (abstract rationality).	-1.091
20	Choices teachers have regarding particular programs are to be made from those selected by central office planners and coordinators (admin, learning process).	-1.164
26	Teaching is primarily a job of bringing resources to learners as a group rather than to each individual (incremental, individual).*	-1.310
21	Changes in teaching techniques are to be determined by administrators (admin, learning process).	-1.369
33	Administrators who are not in direct contact with classrooms can still maintain a good feel for what goes on in classrooms (coordination, without).*	-1.470
34	Teachers are to have autonomy over instructional activities (coordination, without).*	-1.504
39	Student achievement test scores are the best way to measure teacher effectiveness (coordination, without).	-1.916

*Negative Item

Table 5

Differences Between Types 1 and 2 Administrators

z-scores differences greater than ± 1.0
(Type 1 Agreement Greater than Type 2)

ITEM #	ITEM DESCRIPTION	TYPE 1	TYPE 2	DIFFERENCE
43	Teachers who concern themselves with humanistic approaches to instruction are more effective than those who concern themselves with measurable outcomes (affectivity).	1.789	-.895	2.684
45	Positive relations between teachers and students are more important than achievement on standardized tests (affectivity).	1.928	-.527	2.455
2	Good teaching is an art and will remain an art (abstract rationality).*	1.260	-.878	2.138
44	By developing students, respect and liking for one another, teachers have then accomplished the major classroom goal (affectivity).	.643	-.823	1.466
33	Administrators who are not in direct contact with classrooms can still maintain a good feel for what goes on in classrooms (coordination, without).	-.029	-1.470	1.441
9	Successful instructional systems can be implemented regardless of the teacher's individual style (urgency change).	.300	-.775	1.074
42	There is too much emphasis placed on the cognitive aspect of learning and not enough on the affective (affectivity).	1.035	-.005	1.039
30	Individualized learning programs contribute to cooperation among students (incremental, individual).	.472	-.543	1.014
	(Type 2 Agreement Greater Than Type 1)			
23	The teacher's major task is to develop those particular skills that standardized tests show the students to be deficient in (incremental, individual).	-1.156	-.152	-1.004
38	Those educators outside the classroom are in a better position to learn about innovations in teaching than are teachers (coordination, without).	-1.592	-.492	-1.100
4	A system wherein goals and objectives are clearly stated and the relations between them clearly defined is essential to good teaching (abstract rationality).	.846	1.947	-1.101
37	District wide coordination of learning activities is important to teacher success (coordination, without).	-1.008	.107	-1.114
6	Teachers need to clearly explain the intended outcomes of their instructional activities (abstract rationality).	.817	2.191	-1.374

*Negative Item

Table 5 (continued)

ITEM #	ITEM DESCRIPTION	TYPE 1	TYPE 2	DIFFERENCE
18	Administrative supervision can best be described as an important contribution to student learning (admin, learning process).	-.273	1.124	-1.398
16	Administrative evaluation is good for teaching (admin, learning process).	.009	1.638	-1.629
19	Administrators are to have a strong voice in the methods and materials used in the classroom (admin, learning process).	-.731	.985	-1.716

in the first analysis. The first administrator type strongly believes in an affective classroom emphasis in which teachers artfully use humanistic approaches to instruction, build positive relationships with students, and provide for individualized instruction while stressing conformity to classroom norms. On the other hand, this type strongly disagrees with the legitimacy of those external to the classroom to influence or determine what happens in the classroom and believes that student achievement tests are not the best way to measure teacher effectiveness. For this type of administrator, six of eight extreme items for beliefs strongly held or rejected are also held or rejected by the teacher type in the first analysis.

The second administrator type (the type that subsequent analyses showed consisted of those engaged in rational management) strongly believes in an emphasis on the intended outcomes of instructional activities, the use and importance of administrative evaluation of teaching, the importance of clearly stated goals and objectives, and affective practices; such as building positive student social attitudes and treating students with

personal respect. On the other hand this type strongly disagrees that teachers keep up with the latest instructional techniques, or that teaching is primarily teaching to groups rather than individuals. This type does not believe in limiting teaching efforts to those things that are measurable, limiting teacher choices regarding programs and teaching techniques to those determined by administrators, and giving teacher autonomy over instructional activities.

Clarification of the contrast between the two types of administrators was addressed by examining the array of items for which a ±1.0 z-score exists. The items summarized in Table 5 reveal that the Type 1 administrator places greater emphasis on affective concerns, such as humanistic approaches to instruction and positive social relations, and believes that too much emphasis is placed on cognition and not enough on affect. This type believes that teaching is an art and will remain an art, and that those not in direct contact with classrooms can maintain a good feel for what goes on in the classroom. These administrators also believe that successful instructional systems can be implemented regardless of the teachers individual style. Since the Type 1-administrators agree with these beliefs to a greater extent than the Type 2 administrators they also indicate the beliefs with which Type 2 administrators disagree.

The other end of the array consists of beliefs which Type 2 administrators agree with to a greater extent than Type 1. These items reveal that they emphasize the importance of administrative assistance in choosing classroom methods and materials, administrative evaluation as good for teaching, and administrators as making a strong contribution to student learning. They believe that a system of goals and objectives is essential to good teaching, that teachers should focus on the intended

outcomes of their instructional activities, and that legitimacy and importance of administrative influence in improving teacher success is legitimate and important.

In sum, elementary principals' beliefs appear to be characterized by affective internal factors similar to the belief patterns held by the single type found in the analysis of teacher beliefs. Administrators engaged in rational management appear to be rational/external in their beliefs, valuing emphasis on abstract modeling of the classroom process and believing in the importance of forces external to the classroom, particularly administrative acts, to influence and induce appropriate classroom practices.

Follow-Up Analysis

In view of these findings, a follow-up analysis was done to determine the relationships between the belief patterns of the one teacher and two administrator types identified. Pearson coefficients of correlation of the item arrays for the three types are reported in Table 6.

Table 6

Correlations Between Types of Belief Patterns for Item Arrays

	Teachers Type 1	Administrators Type 1	Administrators Type 2
Teachers Type 1	---	.86	.52
Administrators Type 1		---	.53

These correlations confirm what we inferred by examining the extreme items for each of the types separately. A high correlation was found between teachers and elementary principals whereas the other belief patterns are moderately related. The high correlation indicates that the single teacher type and first administrator type, produced by independent analysis, are very similar in belief patterns concerning teaching, learning, and classroom organization.

A second follow-up analysis was done to determine the association between the two types of administrator belief patterns and administrative groups of elementary principals or advocates of rational management. Table 7 presents a cross tabulation of belief pattern type by administrative group for the administrators' Q-analysis.

Table 7

Cross Tabulation of Types of Administrator Belief Patterns By Administrator Group

GROUP	Type of Belief Pattern: Admin Type-1	Admin Type-2	
Elementary Principal	16 72.7%	6 27.3%	22
Advocates Rational Management	2 16.7%	10 83%	12
	18	16	34

The analysis indicates that 83% or 10 of the 12 administrators who were actively engaged in using a rational model factored out as the second type and their belief patterns were consistent with the position they espoused in our interviews. Sixteen of the 22 elementary principals (72.7%) factored out as the first type and their belief patterns were consistent with the teacher type emphasizing affective internal beliefs. Thus, the type of administrator belief pattern is associated with the non assignable variable of administrative group.

In view of these findings, a third Q-analysis was conducted to determine if teachers and elementary principals would form a separate type of belief pattern when analyzed with administrators who advocated rational management.

Since we wished to achieve the clearest description of the types present when analyzing the three groups jointly and avoid the technical problems of attempting to invert a correlation matrix in which the number of people exceeds the number of items, we selected representatives from each group in the following manner. The teacher-type 1, administrator-type 1, and administrator-type 2 factor matrices were examined to determine those individuals whose factor loading for each type explained at least 60% of the individuals communality and was greater than .500. This resulted in the selection of 12 teachers, 15 elementary principals, and six administrators advocating rational management representing each of the types described earlier.

The Q-analysis of this set of 33 individuals resulted in a two factor solution accounting for 48.6% of the total variance and 61% of the estimated communality. The scree and common variance tests suggested four and five factors respectively, but Humphrey's test suggested that only the first two factors were meaningful. A varimax rotation of the

two factor solution resulted in the first factor accounting for 34.1% and the second factor accounting for 14.5% of the total variance. Factor one accounted for 20% and factor two 30% of the common variance accounted for by both factors. The arrays of extreme item z-score for both types are presented in Tables 8 and 9 and the descending array of items for which the z-score difference between types exceeded 1.0 is presented in Table 10.

Inspection of the extreme items for Type-1 reveals a set of items very similar to the single teacher type of the first Q-analysis and the first type of administrator (elementary principals) in the second Q-analysis. Six of the eight items which this type strongly agrees with are the same as those found in the single teacher type analysis, and seven of the eight items are the same as those found in Type-1 administrators in the administrator analysis. Of the items representing strong disagreement, eight of eight and six of eight are the same as the first type found in the teacher's and administrator's analyses, respectively.

This first type strongly believes in an affective classroom emphasis in which teacher artfully use humanistic approaches to instruction, build positive relationships with students and among students, and provide for individualized instruction while conforming to classroom norms. These humanistic approaches are believed to be an indicator of effective teachers. On the other hand, this type strongly disagrees with the legitimacy of those external to the classroom to influence or determine what happends in the classroom or with the value of teaching to specific measurable deficiencies.

The second type is very similar to the second type of the administrator analysis. Nine of 10 items strongly agreed and five of seven items strongly disagreed with beliefs are the same as those found in Type-2

Table 8

Extreme Items for Type 1 - Follow Up Q-Analysis

z-scores greater than 1.0
(Items Most Stongly Agreed With)

ITEM #	ITEM DESCRIPTION	z-score
40	The most important thing teachers can do is to treat students with personal respect (affectivity).	1.970
45	Positive relations between teachers and students are more important than achievement on standardized tests (affectivity).	1.870
43	Teachers who concern themselves with humanistic approaches to instruction are more effective than those who concern themselves with measurable outcomes (affectivity).	1.793
2	Good teaching is an art and will remain an art (abstract rationality).*	1.565
41	Building positive student social attitudes is an important goal for teachers (affectivity, behavior).	1.415
27	It is as important for a child to achieve individually as it is for that child to conform to classroom norms (incremental, individual).	1.193
28	The most successful classrooms are those wherein each child is working at his or her individual level (incremental, individual).	1.185
46	The important thing in classrooms is how students behave in class with respect to others (behavior).	1.044

z-scores less than -1.0
(Items Most Strongly Disagreed With)

ITEM #	ITEM DESCRIPTION	z-score
23	The teacher's major task to to develop those particular skills that standardized test show the students to be deficient in (incremental, individual).	-1.039
19	Administrators are to have a strong voice in the methods and materials used in the classrooms (admin, learning process).	-1.097
33	Administrators who are not in direct contact with classrooms can still maintain a good feel for what goes on in classrooms (coordination, without).	-1.291
20	Choices teachers have regarding particular programs are to be made from those selected by central office planners and coordinators (admin, learning process).	-1.389
1	Teachers' major efforts are to be directed toward teaching those things that can be tested (abstract rationality).	-1.407
38	Those educators outside the classroom are in a better position to learn about innovations in teaching than are teachers (coordination, without).	-1.628
21	Changes in teaching techniques are to be determined by administrators (admin, learning process).	-1.649
39	Student achievement test scores are the best way to measure teacher effectiveness (coordination, without)	-2.365

*Negative Item

Table 9

Extreme Items for Type 2 - Follow Up Q-Analysis

z-scores greater than 1.0
(Items Most Strongly Agreed With)

ITEM #	ITEM DESCRIPTION	z-score
6	Teachers need to clearly explain the intended outcomes of their instructional activities (abstract rationality).	2.412
4	A system wherein goals and objectives are clearly stated and the relations between them clearly defined is essential to good teaching (abstract rationality).	2.122
41	Building positive student social attitudes is an important goal for teachers (affectivity, behavior).	1.413
16	Administrative evaluation is good for teaching (admin, learning process).	1.394
27	It is as important for a child to achieve individually as it is for that child to conform to classroom norms (incremental, individual).	1.326
18	Administrative supervision can best be described as an important contribution to student learning (admin, learning process).	1.322
7	It is important that teachers have clearly stated goals for all classroom activities (abstract rationality).	1.274
28	The most successful classrooms are those wherein each child is working at his or her individual level (incremental, individual).	1.085
24	A teacher's job is to be the orchestrator of individualized learning activities (incremental, individual).	1.063
19	Administrators are to have a strong voice in the methods and materials used in the classrooms (admin, learning process).	1.040

z-scores less than -1.0
(Items Most Strongly Disagreed With)

ITEM #	ITEM DESCRIPTION	z-score
22	A teacher's job is to be the manager of group activities (incremental, individual).*	-1.128
44	By developing student's respect and liking for one another, teachers have then accomplished the major classroom goal (affectivity).	-1.136
33	Administrators who are not in direct contact with classrooms can still maintain a good feel for what goes on in classrooms (coordination, without).	-1.234
21	Changes in teaching techniques are to be determined by administrators (admin, learning process).	-1.263
26	Teaching is primarily a job of bringing resources to learners as a group rather than to each individual (incremental, individual).	-1.335
34	Teachers are to have autonomy over instructional activities (coordination, without).	-1.729
39	Student achievement test scores are the best way to measure teacher effectiveness (coordination, without).	-1.950

*Negative Item

Table 10

Differences Between Follow-Up Analysis Types 1 and 2

z-scores differences greater than ±1.0
(Type 1 Agreement Greater Than Type 2)

ITEM #	ITEM DESCRIPTION	TYPE 1	TYPE 2	DIFFERENCE
45	Positive relations between teachers and students are more important than achievement on standardized tests (affectivity).	1.870	-.940	2.810
43	Teachers who concern themselves with humanistic approaches to instruction are more effective than those who concern themselves with measurable outcomes (affectivity).	1.793	-.854	2.647
2	Good teaching is an art and will remain an art (abstract rationality).	1.565	-.976	2.541
44	By developing students respect and liking for one another, teachers have then accomplished the major classroom goal (affectivity).	.846	-1.136	1.982
34	Teachers are to have autonomy over instructional activities (coordination, without).	-.392	-1.729	1.337
40	The most important thing teachers can do is to treat students with personal respect (affectivity).	1.970	.706	1.265
25	Development of the class into a mini-community is an important prerequisite to effective teaching (incremental, individual).*	.684	-.412	1.096
42	There is too much emphasis placed on the cognitive aspect of learning and not enough on the affective (affectivity).	.802	-.265	1.066
	(Type 2 Agreement Greater Than Type 1)			
37	District wide coordination of learning activities is important to teacher success (coordination, without).	-.949	.327	-1.276
4	A system wherein goals and objectives are clearly stated and the relations between them clearly defined is essential to good teaching (abstract rationality).	.778	2.122	-1.345
38	Those educators outside the classroom are in a better position to learn about innovations in teaching than are teachers (coordination, without).	-1.628	-.060	-1.568
6	Teachers need to clearly explain the intended outcomes of their instructional activities (abstract rationality).	.628	2.412	-1.783
16	Administrative evaluation is good for teaching (admin, learning process).	-.436	1.394	-1.830

Table 10 (Continued)

ITEM #	ITEM DESCRIPTION	TYPE 1	TYPE 2	DIFFERENCE
19	Administrators are to have a strong voice in the methods and materials used in the classrooms (admin, learning process).	-1.097	1.040	-2.137
18	Administrative supervision can best be described as an important contribution to student learning (admin, learning process).	-.888	1.322	-2.209

*Negative Item

This type strongly believes in an emphasis on the intended outcomes of instruction activities, the use and importance of administrative evaluation of teaching, and administrative influence in shaping the methods and materials used in classrooms. Conversely, this type strongly disagrees with the beliefs that good teaching is managing group activities, or that affective emphasis is the major classroom goal. This type will limit teaching efforts to those things that are measurable, and limit teacher autonomy over instructional activities.

The differences between the two types identified were found by examining the array of items for which a ± 1.0 z-score exists and they are presented in Table 10. Examination of these items indicates the types distinguished from one another in that Type-1 holds affective beliefs and rejects external intrusion which would unbalance this emphasis, whereas Type-2 holds rataional beliefs and emphasizes the importance of external influences to provide necessary coordination. We label the first type "affective-communal" and the second type "rational monitoring" to signify the major differences found in the two types produced in this follow-up Q-analysis.

Table 11 illustrates the association between group identification (teacher, elementary principal, rational management advocate) and type of belief pattern (affective-communal, rational monitoring).

Table 11

Cross Tabulation of Types of Belief Patterns
By Group Identification - Follow Up Analysis

GROUP	Type of Belief Pattern: Type-1 Affective communal	Type-2 Rational Monitoring	
Teachers	12 100%	-- 0%	12
Elementary Principals	11 73%	4 27%	15
Advocates of Rational Management	-- 0%	6 100%	6
	23	10	33

Conclusions and Implications

This study was undertaken to investigate some possible points of conflict between classroom teachers and those administrators outside the classroom who actively engage in attempts to influence classroom procedures by the implementation of rational management models. We suggested that the problems that emanate from these attempts may be traced to fundamental differences of perspective, with the teachers holding a gemeinshaft orientation to the organization of their classes, and the National/External administrators using a gesellshaft perspective in their attempts to impose structure on teachers. In the symbolic interactionist sense, the term "perspective" connotes reasonableness, with the individual taking his situation into consideration and then developing, what for him, is a reasonable approach to a problem. Hence, for a teacher faced with the necessity of relating

to 20 or 30 students every day for an entire school year, it makes sense to emphasize the development of a community within which disciplined and orderly discourse will take place. That teachers draw boundaries around the class and resist change is a necessary side effect of such a structure. For a distant administrator faced with the necessity of affecting people whom he rarely sees and in whom he has a very limited interest, it would make sense to emphasize a structure which would give him the greatest access and which would emphasize those aspects of learning with which he is most interested and for which he feels most responsible.

Indeed our findings support our initial suggestion that teachers hold a perspective emphasizing an effective communal organization, which emphasized normative behavior in a bounded and change-resistant society, while over 80% of the administrators whom we identified as being involved in the implementation of a rational management model did indeed emphasize the abstract modeling of classroom learning and the importance of outside forces to affect classrooms. This was confirmed by both the primary and follow-up analyses.

Our initial suggestion, that there are some fundamental differences in perspective between our two major groups, and that these differences are explicable by the concepts of gemeinshaft and a gesellshaft, was strengthened by the study. In addition, we discovered that the elementary principals whom we studied were just as opposed to the "rational external" set of beliefs as were the elementary teachers and indeed their beliefs about teaching and learning in classrooms were almost identical to those espoused by the teachers.

Our initial findings do not auger well for those who advocate a greater degree of external control placed on classrooms, or for those who wish to have teachers place greater emphasis on the development of more systematic classroom delivery systems. They suggest that the

fundamental problem for teachers is the maintenance of orderly, systematic and courteous discourse, and the system they use to obtain that is one that resists change, resists outside influences, and resists the notion that either are particularly helpful. Furthermore, they suggest that the dichotomy of beliefs and any conflict that results from the dichotomy is not simply a teacher-administrator issue, but is between those who are closest to and perhaps more responsive to the total problem of managing children and those who are more distant from children and hence more dependent on an idealized and abstracted view of the processes of education.

Reference Notes

1. Bleecher, H., The authoritativeness of Michigan's educational accountability program. Unpublished doctoral dissertation, Michigan State University, 1975.

2. Clinton, C.A. The politics of developmental change. Washington, D.C.: National Institute of Education, Contract No. OEC-0-72-5245, 1977.

3. Levine, D.M. The implementation of accountability systems, a psychosocial approach. National Institute of Education, Contract No. 6-74-053, Project Number 4-07-64.

4. Patton, M.Q., & Perrone, V. Does accountability count without teacher support? An assessment of the Kalamazoo Public Schools accountability system from the perspective of teachers. Kalamazoo, Michigan, 1976.

5. Janesick, V. An ethnographic study of a teacher's classroom perspective. Unpublished doctoral dissertation, Michigan State University, 1977.

6. Martin, W. A participant observation study of an experiential curriculum experiment. Unpublished doctoral dissertation, Michigan State University, 1977.

References

Hartley, H.J. Educational planning, programming, budgeting: A systems approach. Englewood Cliffs, N.J.: Prentice-Hall, 1968.

Hovey, H.A. The planning, programming, budgeting approach to government decision-making. New York: Frederick A. Praeger, Publisher, 1968.

Knezevich, S.J. Administrative technology and the school executive. Washington, D.C.: American Association of School Administrators, 1975.

Lortie, D. Schoolteacher: A sociological study. Chicago: University of Chicago Press, 1975.

Montello, P.A., & Wimberly, C.A. Management systems in education. Professional Publications, 1975.

Smith, L., & Geoffrey, W. Complexities of an urban classroom. New York: Holt, Rinehart, & Winston, 1968.

Stephenson, W. A study of behavior. Chicago: University of Chicago Press, 1953.

Tönnies, F. Community and society (Gemeinschaft and Gesellschaft). (C.P. Loomis, Ed. and trans.). East Lansing, Michigan: The Michigan State University Press, 1957.

Wolcott, H. Teacher vs. technocrat. Eugene, Oregon: Center for Educational Policy and Management, University of Oregon, 1977.

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